

LT3045IDD#PBF

Data Sheet

20V, 500mA, Ultralow Noise, Ultrahigh PSRR Linear Regulator

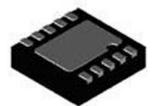
Manufacturers Analog Devices, Inc

Package/Case 10-Lead DFN (3mm x 3mm w/ EP)

Product Type Power Management ICs

RoHS

Lifecycle



Images are for reference only

Please submit RFQ for LT3045IDD#PBF or <u>Emailto:sales@ovaga.com</u> We will contact you in 12 hours.

RFO

General Description

The LT3045 is a high performance low dropout linear regulator featuring LTC's ultralow noise and ultrahigh PSRR architecture for powering noise sensitive applications. Designed as a precision current reference followed by a high performance voltage buffer, the LT3045 can be easily paralleled to further reduce noise, increase output current and spread heat on the PCB.

The device supplies 500mA at a typical 260mV dropout voltage. Operating quiescent current is nominally 2.2mA and drops to <<1µA in shutdown. The LT3045's wide output voltage range (0V to 15V) while maintaining unity-gain operation provides virtually constant output noise, PSRR, bandwidth and load regulation, independent of the programmed output voltage. Additionally, the regulator features programmable current limit, fast start-up capability and programmable power good to indicate output voltage regulation.

The LT3045 is stable with a minimum $10\mu F$ ceramic output capacitor. Built-in protection includes reverse-battery protection, reverse-current protection, internal current limit with foldback and thermal limit with hysteresis. The LT3045 is available in thermally enhanced 12-Lead MSOP and 10-Lead 3mm \times 3mm DFN packages.

VIOC FunctionLT3045-1YesLT3045No

Features

Ultralow RMS Noise: 0.8 µVRMS (10Hz to 100kHz)

Ultralow Spot Noise: 2nV/√Hz at 10kHz

Ultrahigh PSRR: 76dB at 1MHz

Output Current: 500mA

Wide Input Voltage Range: 1.8V to 20V

Single Capacitor Improves Noise and PSRR

100μA SET Pin Current: ±1% Initial Accuracy

Single Resistor Programs Output Voltage

High Bandwidth: 1MHz

Programmable Current Limit

Low Dropout Voltage: 260mV

Output Voltage Range: 0V to 15V

Programmable Power Good

Fast Start-Up Capability

Precision Enable/UVLO

Parallelable for Lower Noise and Higher Current

Internal Current Limit with Foldback

Minimum Output Capacitor: 10µF Ceramic

Reverse-Battery and Reverse-Current Protection

12-Lead MSOP and 10-Lead 3mm × 3mm DFN Packages

Application

RF Power Supplies: PLLs, VCOs, Mixers, LNAs, PAs

Very Low Noise Instrumentation

High Speed/High Precision Data Converters

Medical Applications: Imaging, Diagnostics

Precision Power Supplies

Related Products



LT3763EFE
Analog Devices, Inc
TSSOP28



LTC4417IUF

Analog Devices, Inc

QFN-24



LT1038CK

Analog Devices, Inc
TO-3



LTC3440EMS
Analog Devices, Inc
MSOP10



LTC1966CMS8#PBF

Analog Devices, Inc MSOP-8P



LTM8045EY#PBF

Analog Devices, Inc BGA40



LTC2990IMS#PBF

Analog Devices, Inc 10MSOP



LT4295IUFD#PBF

Analog Devices, Inc 28-WFQFN